UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, OAKLAND DIVISION

CHASOM BROWN, et al., on behalf of themselves and all others similarly situated,
 	
    Plaintiffs,
 	
      vs.
 	
GOOGLE LLC,
 	
    Defendant.
	Case No. 4:20-cv-03664-YGR-SVK

PATRICK CALHOUN, et al., on behalf of themselves and all others similarly situated,
 	
    Plaintiffs,
 	
      vs.
 	
GOOGLE LLC,
 	
    Defendant.
	Case No. 4:20-cv-05146-YGR-SVK

DECLARATION OF BENJAMIN KORNACKI

1.   I am a Software Engineer employed by Google LLC. I have been employed at Google since January 2013. I have been a member of the Ad Manager Reporting & Insights Team since January 2013. In my capacity as a member of the Ad Manager Reporting & Insights Team, I am responsible for building pipelines to digest historical data and produce analytics and insights to our customers. As part of my duties, I am familiar with the tools available at Google to access, search, and store data in Google's ███████ logs. I make this declaration based on personal knowledge and information provided to me by Google colleagues, and if called to testify, I could and would competently testify to such facts.

2.   I understand the Court issued preservation orders in the above-captioned cases requiring that Google preserve data in ███████ logs, among other data sources. I understand the Court has ordered a daily "sample" preservation of data for 10,000 U.S-based users in █

1   ███████████████ log sources for the *Brown* and *Calhoun* cases, and a "full ongoing

2   preservation" of specific fields from █████████████ log sources for the *Calhoun* case. I further

3   understand that Google is required by July 30, 2022, to establish a process to ████████████

4   ██

5   ██

6   ████████████████████████████████

7   3.   Google does not have pre-existing solutions to implement the preservation

8   obligations described above for the ██████████ log sources. I am diligently working with four

9   engineers to design and develop solutions to perform the various steps that are required for

10 preservation. To comply with the order, we have to █████████████████████████

11 ██

12 ██

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14 ████████████████████████████████████

15   4.   At a high level, the steps involved in this design work include: ██████████

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24 ████████████████████████████████

25   5.   We have made substantial progress toward the goal of developing the above-

26 described solutions. Our team of engineers has met multiple times to discuss the various obstacles

27 we have encountered, which is common for a project of this scope, and options for overcoming

28 those obstacles. Currently, we are in the process of configuring a new encryption key and

1 designing and developing scripts to implement the data pipelines. However, even with the

2 involvement of multiple Google engineers, it will not be possible to complete the required tasks by

3 the July 30 deadline imposed by the Court.

4   6.   `Once the design is complete, we will work on implementation. Our estimate for

5 the amount of time necessary to complete the implementation of this project is based on multiple

6 factors. ██

7 ██

8 ██

9 ██

10 ██

11 ██

12 ████████████████

13   7.   Additionally, I understand the Court's orders require Google to preserve data

14 beginning on the later of (1) first day for which there is data stored in the data source or (2) July

15 27, 2016, continuing to the present and into the future. Certain of the identified ██████████ log

16 sources include data that goes back to July 2016, containing more than six years of data. To

17 implement this "backfilling" and preserve historical data in ██████████ log sources, the data

18 pipelines that we develop will start with the earliest date for which data is stored or July 27, 2016,

19 and proceed forward. Because the pipelines will have to read an enormous volume of historical

20 logs data to extract the limited data we are sampling, this task will take a long time, even with

21 Google's significant computing resources. The pipelines will require continuous monitoring

22 during this time. On the basis of information currently available, I estimate that we will need an

23 additional 60 days to complete the backfill process.

24   I declare under penalty of perjury that the foregoing is true and correct.

25   Executed on the 27th day of July 2022 at New York, New York.

26

27   By: *Ben Kornacki*

                                      Benjamin Kornacki

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